Statewide Initiatives in Curriculum and Assessment: Spring 2003

Curriculum/Assessment Initiatives

- Curriculum Sampler
  - examples of good curriculum
  - descriptions of critical components of curriculum
  - not a model curriculum
  - evolving, virtual document "living" on DESE Curriculum Section's Web site (www.dese.state.mo.us/divimprove/curriculum)

Initiatives (continued)

- State Model Curriculum
  - measurable objectives, instructional strategies, assessments for CA and MA
  - work begins summer 2003
  - completion slated for summer 2005

Initiatives (continued)

- Grade-Level Expectations
  - What?
  - Why?
  - How?
  - Who?
  - When?
  - Next steps?
  - How to review recent draft?

Grade-Level Expectations

- We are currently developing "grade-level expectations" for mathematics, communication arts, science, and social studies.
- These expectations will form the foundation—the "measurable learner objectives"—for a soon-to-be-developed model state curriculum. (MA and CA will be written first; we will complete the curricula for these two subjects in Summer 2005.)

Grade-Level Expectations

- Why?
  - Comply with the No Child Left Behind Act of 2001
  - Inform MAP test-development process
  - Provide support and specificity for local curriculum development
  - Provide foundation for state model curriculum

Grade-Level Expectations

- How?
  - Writing committees prepare first draft (Aug-Dec ‘02)
  - Review committees offer feedback (Nov-Dec ‘02)
  - Writing committees revise (Dec-Feb ’03)
  - Educators across state review second draft (via professional meetings, Web, mailings, etc.) (Mar-Apr ’03)
  - Writing committees revise again (Apr-June ’03)

These resources informed the Communication Arts Expectations:

- Show-Me Standards, Frameworks for Curriculum Development, and MAP documents
- NAEP Reading and Writing Frameworks
- NCTE and IRA Standards for English Language Arts
- McREL Language Arts Standards
- CIERA - Every Child A Reader
- NIFL – Put Reading First
- School district curriculum documents
- Curriculum documents from other states

These resources informed the Mathematics Expectations:

- National Council of Teachers of Mathematics (NCTM) Standards
- Framework for Curriculum Development in Mathematics and MAP documents
- National Assessment of Educational Progress (NAEP) Mathematics Framework

Grade-Level Expectations

- Who?
  - Writers and reviewers from all regions of the state and representing diverse perspectives are involved.
  - Representatives from teacher and administrator professional organizations (e.g., AFT-MO, MNEA, MSTA, MAESP, MMSA, MASSP, MASCD, MASA) are being included.
  - We want as many voices as possible!

These resources informed the Science Expectations:

National Documents

- **Project 2061: Benchmarks for Scientific Literacy**
- **Atlas of Science Literacy (AAAS)**
- **National Science Education Standards**

State Documents

- **The Show-Me Standards**
- **Missouri's Framework for Curriculum Development in Science**
- **Assessment Annotations for the Curriculum Frameworks**
- **Frameworks from Other States (e.g. OH, TX, SC, UT, CA, FL)**

Missouri School Districts' Curricula

Grade-Level Expectations

- When?
  - Develop and revise in 2002-2003
  - Send to US Dept. of Education in June 2003
  - Prepare final form for dissemination in June 2003
  - Begin professional development in Spring 2003

For more information . . .

- Call the Curriculum and Assessment Staff at 800/845-3545 or 573/751-2625, or e-mail us.
- Visit our Web sites:

  http://www.dese.state.mo.us/divimprove/curriculum

  http://www.dese.state.mo.us/divimprove/assessment

Standard 1: Properties and Principles of Matter and Energy

Draft 3/21/03

A. Properties and Structure of Matter

Benchmark	Grade-Level Expectations				Benchmark	Grade-Level Expectations				Benchmark	Grade-Level Expectations	
	Grade K	Grade 1	Grade 2	[illegible]		Grade 4	Grade 5	Grade 6	[illegible]		Grades 8, 9, 10	Grades 11
1. Objects and materials have properties that can be used to describe and classify them.	•Identify materials (cloth, paper, wood, metal, etc.) that make up an object •Describe physical properties (color, size, shape, mass, texture, etc.) of materials and objects by using the senses and/or simple tools (magnifier/centimeter ruler) •Sort objects based on observable properties (color, size, shape, mass, etc.)		•Use simple tools (magnifier, centimeter ruler, and balance,) to collect data describing the physical properties of materials and objects		4. Matter is made of particles too small to be seen.		•Explain using words or drawings how heating and cooling affect the arrangement and motion of particles •Illustrate how matter is made of particles too small to be seen (See SC 5)			7. The periodic table organizes the elements according to their physical properties and chemical reactivity.	•Create and explain the structure of the periodic table in terms of the elements with common properties (groups/families) and repeating properties (periods) •Contrast the common properties of metal and nonmetals and their location in the periodic table •Explore the relationship of chemical reactivity and position on the periodic table through various laboratory experiments	
ST	SC 1 1.2, 1.6		SC 1 1.2, 1.4		ST		SC 1 1.6, 1.8			ST	SC 1 1.6, 3.5	
FR	III A1 (K-4); III A6 (K-4)		III A1 (K-4); III A6 (K-4)		FR		III C2 (K-4); III A4 (5-8)			FR	III A1 (9-12)	
2. Matter is anything that takes up space, has mass, and exists as solids, liquids, or gases that can be combined to form mixtures.	•Measure the mass of objects using a balance •Compare the mass of objects •Order objects according to mass		•Compare properties of water as a solid, liquid and gas •Classify everyday objects/substances as solid, liquid or gas •Record how various solids behave when mixed with water •Investigate ways to separate mixtures		5. Substances can be described by their properties.			•Describe a substance according to its properties (magnetic, conductivity, melting point, boiling point, and solubility) •Identify and measure particular properties using the appropriate tool(s) (graduated cylinder, balance, thermometer, voltmeter, etc.)		8. Properties of mixtures depend upon the concentrations, properties, and interactions of particles.	•Examine through experimentation the properties of mixtures •Qualitatively distinguish between the types of solutions (dilute, concentrated, saturated, supersaturated) •Organize examples of mixtures into heterogeneous and homogeneous (solutions) categories •Distinguish and compare the properties of acid and basic and neutral solutions (taste, feel, pH)	
ST			SC 1 1.2, 1.8	SC 1 1.3	ST			SC 1 1.2,1.4		ST	SC 1 1.2, 1.6	
FR			III A2 (K-4); III A3 (K-4)	III A4 (K-4)	FR			III A2 (5-8); I A2 (5-8)		FR	III A7 (3-8) III A3 (9-12)	

Grade-Level Expectations

- Next steps
  - Comprehensive professional development
  - Model curriculum development
  - Test refinement
    - Math--grades 4, 8, 10
    - Communication Arts--grades 3, 7, 11
  - Test construction
    - Math--grades 3, 5, 6, 7
    - Communication Arts--grades 4, 5, 6, 8

Grade-Level Expectations are on the Web (in draft form for feedback until April 18) at…..

http://www.dese.state.mo.us/divimprove/curriculum/index.html

Initiatives (continued)

- "Expanded" MAP that is part of a single system of accountability

  - need MAP CA and MA grade-level assessments to meet NCLB requirements

  - new CA and MA assessments similar to existing tests; grade-level tests replace some grade-span tests

  - all CA and MA tests will include MC and CR items; PEs stay at MA 4, 8, 10 and CA 3, 7, 11

  - National Assessment of Educational Progress (NAEP) results will be used to verify MAP results

To comply with No Child Left Behind Act, MAP *must*

- include yearly measures of student learning in math and communication arts at grades 3-8 and at a high-school grade
- include yearly measures of learning in science at an elementary grade, a middle-school grade, and a high-school grade
- be the same system used to measure the achievement of all students
- be valid, reliable, and of high technical quality
- be aligned with Missouri's Show-Me Standards
- express student results in terms of Missouri's academic achievement standards

To comply w/NCLB, MAP *must*

- provide a coherent system across grades and subjects and may include CRTs and augmented NRTs
- assess higher-order thinking skills and understanding of challenging content
- be valid and accessible for use with widest possible range of students
- provide alternate assessments for students whose disabilities preclude participation in "regular" assessments

To comply w/NCLB, MAP *must*

- report results in terms of at least three levels (advanced, proficient, basic)
- provide for disaggregation of results by gender, racial/ethnic group, LEP status, migrant status, students with disabilities, economically disadvantaged
- provide results no later than beginning of next school year

Time Line for Implementing NCLB Assessment Requirements

2002-2003

- Administer CA and MA assessments at least once in elementary, middle, and high school
- Write and disseminate grade-level expectations for MA, CA, SC (also SS)
- Design comprehensive "NCLB-compliant" assessment system that includes existing and new MA, CA tests and revised MAP-A
- Begin development of new MA, CA assessments
- Confirm achievement levels

Time Line (continued)

2003-2005

- Administer CA and MA assessments at least once each year in elementary, middle, and high school
- Provide PD re grade-level expectations
- Continue development of new CA, MA assessments
- Revise existing CA, MA assessments as necessary
- Revise MAP-A

Time Line (continued)

2003-2005

- Pilot and field test revised MAP-A
- Pilot and field test new CA, MA items
- Create new CA, MA assessment forms
- Determine cut scores and define achievement levels for CA, MA assessments and for MAP-A

Time Line (continued)

2005-2006

- Administer assessment system that now includes additional tests (MA 3-8, 10; CA 3-8, 11; revised MAP-A)
- Compile technical information for new assessment-system components (CA, MA, MAP-A)

Time Line (continued)

2006-2007

- Administer "expanded" assessment system (that includes additional MA and CA tests for grades 3-8 and high-school grades) and also includes revised MAP-A

Time Line (continued)

2007-2008

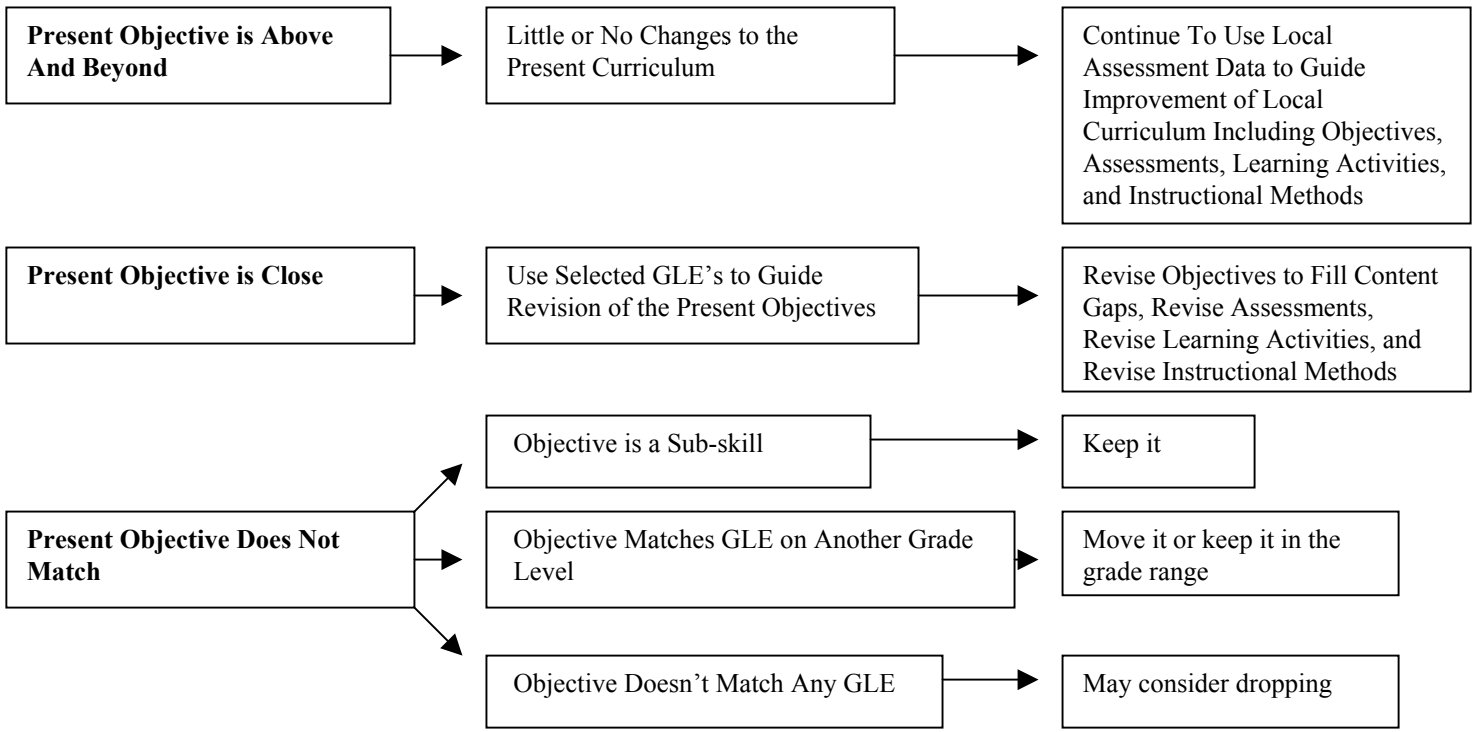
- Assessment system must now also include yearly SC assessments for elementary, middle-school, and high-school levels

GLE Implementation Strategies

Correlation Study

Content areas and Grade ranges

Four Findings



Discussion Questions

1. What will be the most effective and efficient way for staff in your district to do the correlation study?
2. What will be the most effective and efficient way for staff in your district to address the findings of your study?

Please contact DESE if you discover areas of concern or have suggestions for improvement as you study and work with the Grade-level Expectations.

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